

## CLAIMS

[30004036 US]

1. A method of detecting a selected portion of a data packet, comprising the steps of:  
defining a reference signal waveform conforming to an expected waveform  
5 representing a signal modulated in accordance with a selected portion of a data packet;  
receiving a data signal containing a data packet with said selected portion;  
deriving a waveform representing said data signal;  
correlating said reference signal waveform with said waveform representing said data  
signal to produce a correlation result; and  
10 identifying said selected portion in said data signal in accordance with said  
correlation result.
2. The method of claim 1, wherein said waveform representing said data signal is  
derived to represent a characteristic of modulation of said data signal in accordance with data  
15 in said data packet.
3. The method of claim 2, wherein said data signal is a frequency-shift keyed signal and  
said waveform representing said data signal is derived to represent frequency deviation of  
said data signal as a function of time.  
20
4. The method of claim 1, wherein said selected portion is a preamble of a data packet.
5. The method of claim 4, wherein said preamble has a plurality of values which can  
correlate with said reference signal waveform, including the step of examining a second part  
25 of the data packet to confirm identification of said preamble.
6. The method of claim 1, wherein said data packet is a Bluetooth data packet.
7. The method of claim 6, wherein said reference signal waveform is a cosine waveform.  
30
8. The method of claim 6, wherein a portion of a sync word in the data packet is  
examined to confirm identification of said preamble.
9. The method of claim 8, wherein the six most significant bits of the sync word are  
35 examined to confirm identification of said preamble.
10. The method of claim 1, wherein said data packet is a DECT data packet.